

Engaging Users with Technology: Gaming at the University of Florida Libraries

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Special Libraries Association 2014 Annual Conference
Vancouver, Canada, June 8-10, 2014



**George A. Smathers
Libraries**

UNIVERSITY of FLORIDA



- University of Florida

AAU & ARL member

One of the largest universities in the US –
almost 50,000 students and over 4,000
faculty

- Marston Science Library

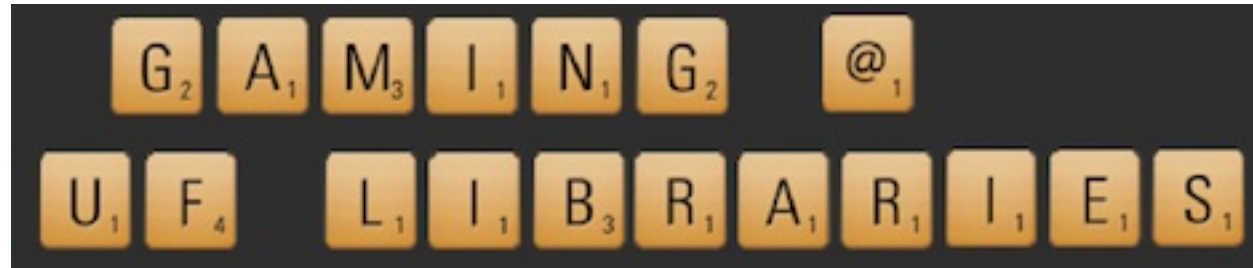
One of 7 libraries on campus

Consolidation of 6 smaller department
libraries on campus in 1987

Serves all science & engineering disciplines

The 'French Fries' are actually a sculpture
called 'Alachua', created by John Henry

<http://www.ufl.edu/about-uf/facts-and-rankings/>
<http://www.uflib.ufl.edu/msl/about/history.html>



<http://cms.uflib.ufl.edu/games/>
<http://guides.uflib.ufl.edu/GamesAtLibraryWest/>
<http://guides.uflib.ufl.edu/zombie/>

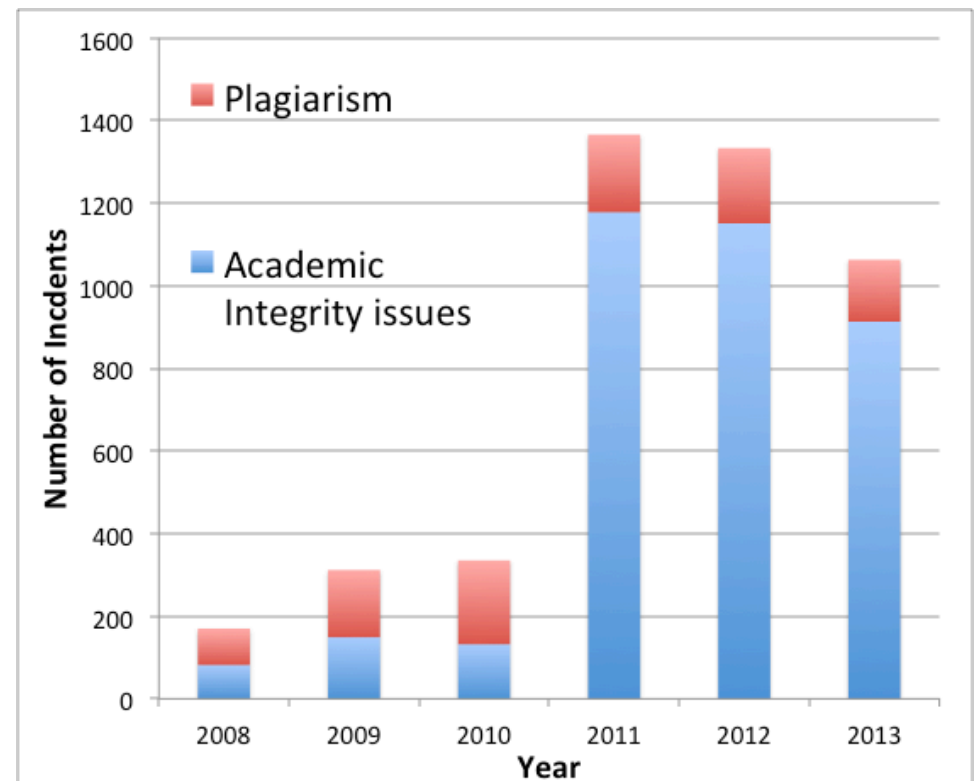


Ethics & Higher Education

Nationally:

- 2005 survey of 63,700 undergraduate students and 9,250 graduate students
 - 62% of undergraduates
 - 59% of graduate students
 - Engaged in “cut and paste” plagiarism from either print or electronic sources at least once in the last three years. (McCabe 2005)

Locally at UF:





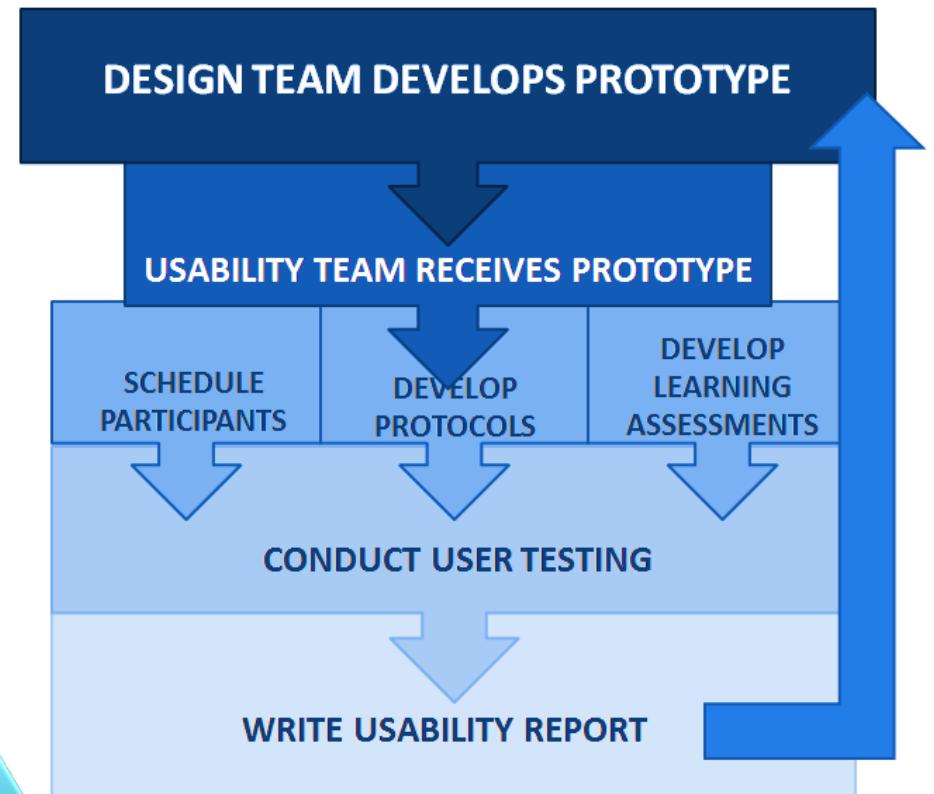
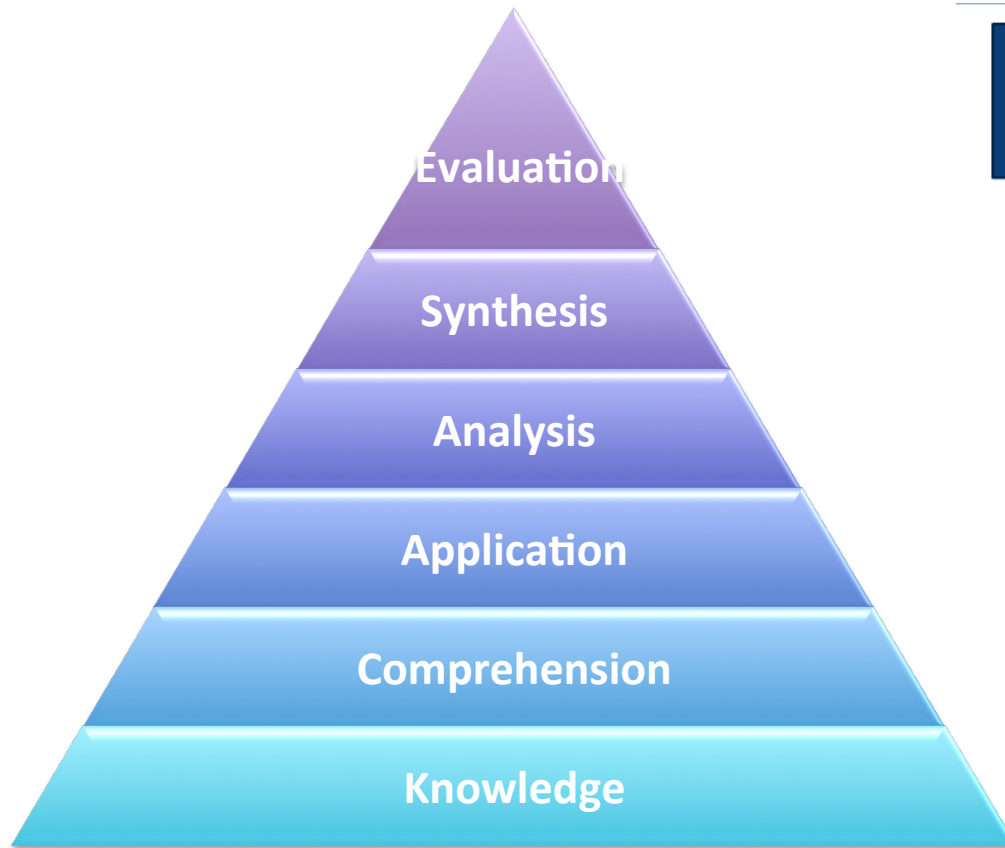
The GAP Project: Gaming Against Plagiarism

- A two year, \$298,000 National Science Foundation (NSF) grant through the Ethics Education in Science & Engineering (EERE) Program
- Project: Create an online, self-directed, interactive game
- Goal: Provide a role-adapting environment for Science, Technology, Engineering, and Mathematics (STEM) disciplines
- Objective: Graduate students recognize, understand and avoid research misconduct in the forms of fabrication, falsification & plagiarism

<http://ufdc.ufl.edu/UF00098766/00001>



The GAP Project: Gaming Against Plagiarism



In Bloom, B. S. (1956). *Taxonomy of educational objectives: The classification of educational goals*. New York: Longmans, Green.



Game 1 – Cheats and Geeks





Game 1 – Cheats and Geeks

Player 1
Suspicion Level: 30%
Roll Factor: 150%

Player 2
Suspicion Level: 10%
Roll Factor: 100%

Pop Quiz

You assigned your undergraduate intern to collect samples from a lake near a landfill. You analyze the data, find irregularities, and then confront your student about their sampling. They admit that the sampling was done at a different location. Due to an approaching deadline, you adjust the data to what you would expect to find for the lake.

Identify The Illegal Behavior:

- ☐ Data Fabrication
- ☐ Data Falsification
- ☐ Plagiarism
- ☐ No Illegal Behavior

Zoom 50% Zoom 100% Auto Zoom



Game 2 – Frenetic Filing





Game 2 – Frenetic Filing





Game 3 – Murky Misconduct





Game 3 – Murky Misconduct

EthiScan 3000

prev ▲

Frank's Paper: Passage 1

According to Convertino, et al. "...characterization of the species' local niche is superficially important for adopting concrete multispecies management scenarios" (2011).

http://dx.doi.org/10.1016/j.ecoleng.2011.02.019
"Ecological Engineering,"
August 2011

1

2

▼ next

corresponding source

http://dx.doi.org/10.1016/j.ecoleng.2011.02.019
Ecological Engineering
August 2011

While ecological niche models at the macro-scale are useful for determining habitat suitability ranges, the characterization of the species' local niche is fundamentally important for adopting concrete multispecies management scenarios.

ma none
stealing
misquoting
patchwriting
self-plagiarism
insuff. paraphrasing
fabrication
falsifying

Passage 1 Evidence (3/3)

- passage is cited
- passage is quoted
- text is not identical

Does passage match source? type: -- ▼

duct? ?

Hide ▼

Accuse



Certification





Formative Assessment: Usability Testing

- Game 1: Quizzes were interesting, having an opponent increased engagement (want to win)
- Game 2: Wanted to understand definitions (would be helpful in the future)
- Game 3: Detecting things increased motivation, interesting to find evidence, satisfaction from successful accusations



Summative Assessment

- Rollout to different campuses – summative
 - Pre- & post-tests focused on skill acquisition
 - Preliminary ANOVA analysis showed no significant difference
 - Not *necessarily* correlated to engagement
- Measures of engagement
 - In-class usage, game 2 in particular – social/competition element as well as content
 - Anecdotal – testimonials: usability, rollout



Post-Development Comments

“I like the one that gives example papers to us and asks us to identify the type of research misconduct. I like how it gives concise definitions of each type of research misconduct. So if I ever **need to review those definitions**, I would be able to go to that game and read them.”

“I liked the second game best, because I **really had to know the definitions** for each to get a good score.”

“I liked the third game the best. It required the most **critical thinking and conceptual application** of the three games. I liked the second game the least, as it could be completed via rote memorization.”



Future Initiatives

- Update the game with content
- Improve scalability
- Build in assessments

➔ To do this, apply for another round of grant funding, hire outside developers for rapid turn-around.



Acknowledgements

- This material is based upon work supported by the National Science Foundation, under Grant EESE IIS #1033002. Any opinions, findings, and conclusions or recommendations expressed in this material are those of the author(s) and do not necessarily reflect the views of the National Science Foundation.
- Marston Science Library
- Caltech Library
- <http://cms.uflib.ufl.edu/games/gap>
- <http://guides.uflib.ufl.edu/stemrcr>

Questions?

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